

A.5.1 Education/Public Outreach (E/PO) Program

1. Scope of Program

The Office of Space Science (OSS) has developed a comprehensive approach for making education at all levels (with a particular emphasis on K-14 education) and the enhancement of public understanding of space science integral parts of all of its missions and research programs. The two key documents that establish the basic policies and guide all OSS Education and Outreach activities are a strategic plan, entitled *Partners in Education: A Strategy for Integrating Education and Public Outreach Into NASA's Space Science Programs* (March 1995), and an implementation plan, entitled *Implementing the Office of Space Science (OSS) Education/Public Outreach Strategy* (October 1996). Both of these documents may be obtained either by selecting *Education and Public Outreach* from the menu on the OSS homepage at <<http://www.hq.nasa.gov/office/oss/>>, or from Dr. Jeffrey Rosendhal, Code S, Office of Space Science, NASA Headquarters, Washington, DC 20546-0001.

In accord with these established OSS policies, proposers to any OSS NRA are strongly encouraged to include an Education/Public Outreach (E/PO) component as part of their scientific research proposal. In addition, anyone holding an existing multiple year research award funded through any previous OSS NRA is encouraged to propose an E/PO supplement to their award (see details in Section 3 below). The following guidelines apply to all proposed E/PO activities:

- An E/PO activity will be funded only in conjunction with an award for a “parent” research proposal;
- The proposed E/PO activity is expected to have a general intellectual linkage to the science objectives of its “parent” proposal and/or the science expertise of its PI;
- The period of performance of the E/PO activity may not exceed that of its “parent” research award;
- Up to \$10K per year may be proposed for an E/PO program, although larger budgets may be considered if funds permit for a few exceptionally meritorious activities, and for “Institutional” E/PO proposals (see Section 3); and
- NASA requests (but does not require) that the institutional overhead for an E/PO budget be waived by the submitting organization, since in many cases such activities will be of direct value to local educational and/or public science institutions and the budget available for this OSS E/PO program is extremely restricted.

E/PO proposals will be funded using funds separate from those for the research grants funded under this NRA, and E/PO funding is considered as an add-on over and above any funding guidelines for research proposals that may be given elsewhere in this NRA. E/PO proposals will be evaluated (see criteria below) by appropriately qualified scientific, education, and outreach personnel, and the substance of these reviews will be conveyed to the proposers as part of their debriefings. The OSS Selecting Official will take into account proposed E/PO tasks and their review ratings when deciding on final selections and funding levels and as an aid in discriminating between research proposals having otherwise comparable merits.

2. Evaluation Criteria

There are two classes of evaluation criteria against which proposed OSS E/PO activities will be evaluated. The general criteria to be applied to the evaluation of all proposals, which reflect requirements necessary for further consideration of an E/PO proposal, are:

- The quality, scope, and realism of the proposed E/PO program including the adequacy, appropriateness, and realism of the proposed budget;
- The capability and commitment of the proposer and the proposer's team, and the direct involvement of one or more science team members in overseeing and carrying out the proposed E/PO program;
- The establishment or continuation of effective partnerships with institutions and/or personnel in the fields of educational and/or public outreach as the basis for an integral element of the proposed E/PO program; and
- The appropriateness of plans for evaluating the effectiveness and impact of the proposed education/outreach activity.

To ensure that the goals and objectives of the OSS E/PO strategy are realized in practice, proposals will also be evaluated using one or more of the following specific criteria. Because of the modest financial scope of this program, it is recognized that not all proposals can (or even should) address all of these specific factors. Therefore, only the applicable subset will be considered in evaluating each individual proposal. An educationally sound, well-posed and focused effort that will clearly be effective in reaching its intended target audience is preferable to an unrealistically broad effort. These specific criteria are:

- For proposals dealing directly with or strongly affecting the formal education system (e.g., through teacher workshops or student programs carried out at informal education institutions such as science museums and planetariums), the degree to which the proposed E/PO effort is aligned with and linked to nationally recognized and endorsed education reform efforts and/or reform efforts at the state or local levels;

- The degree to which the proposed E/PO effort contributes to the training, involvement, and broad understanding of underserved and/or underutilized groups in science and technology; and/or
- The potential for the proposed E/PO activity to expand its scope by having an impact beyond the direct beneficiaries, reaching relatively large audiences, being suitable for replication or broad dissemination, or drawing on resources beyond those directly requested in the proposal.

Although creativity and innovation are certainly encouraged, note that neither of these sets of criteria focuses on the originality of the proposed effort. Instead, NASA seeks assurance that the proposer is personally committed to the E/PO effort and that the PI and/or appropriate research team members will be actively involved in carrying out a meaningful, effective, credible, and appropriate E/PO activity; that such an activity has been planned and will be executed; and that the proposed investment of resources will make a significant contribution towards meeting stated plans and objectives. To aid proposers in the preparation of their proposals, as well as to ensure that reviews are carried out on a consistent basis aligned with the OSS Education Strategy and Implementation Plan, an *Explanatory Guide* to E/PO evaluation criteria has been prepared and may be found by linking through *Education and Public Outreach* at the Web site <<http://www.hq.nasa.gov/office/oss/>>.

3. Special Case E/PO Proposals

There are three special cases for the submission of E/PO proposals that may be considered by interested participants in OSS programs:

3.1 Submission of the Same E/PO Proposal to Multiple Program Elements within a Single NRA

OSS recognizes that some proposers may submit research proposals to more than one program element offered in a single NRA, or may submit more than one research proposal to the same program element of a single NRA. In either case, it is permissible to submit the same E/PO proposal with all such research proposals subject to three conditions: (i) that OSS will review such an E/PO proposal only the first time it is submitted; (ii) that this one evaluation will carry through to all further submissions of that E/PO proposal for that one NRA; and (iii) that such an E/PO proposal will be funded only once. The Web page that is used for the submission of the E/PO proposal (see Section 5

below) provides for entering information to indicate to OSS that an E/PO proposal has been submitted in conjunction with another research proposal for a given NRA. Note that in such a case, the E/PO proposal must be resubmitted in the identical form as it was the first time; OSS will not separately evaluate E/PO proposals that have only minor changes between such multiple submissions. Substantially different E/PO proposals will, of course, be considered individually.

3.2 “Institutional” E/PO Proposals

Based on recent experience, OSS recognizes that multiple proposers from the same institution who are responding to the same NRA (or single program element within a multiple program NRA) may wish to submit a common, collaborative “Institutional” E/PO proposal. Such proposals should be of larger scope and would be expected to have a larger impact than that possible under the parentage of a single research proposal. Therefore, NASA OSS allows the submission of a common Institutional E/PO proposal involving an arbitrary number of proposers from that one institution subject to the following conditions:

- The identical E/PO proposal must be submitted in conjunction with every “parent” research proposal submitted from that institution for a single given program element. The Web page that is used for the submission of the E/PO proposal (see Section 5 below) provides for entering information to indicate to OSS that the E/PO proposal is an Institutional Proposal. It must be clearly marked as an Institutional proposal, identify all the separate research proposals associated with it, identify a team leader for the overall E/PO effort (who may be someone from that institution other than one of the proposing Principal Investigators), and identify all participating personnel.
- Such an Institutional proposal will be reviewed only once by NASA, and a decision whether to fund that proposal (or parts of it--see below) will be made on the basis of that one review.
- The maximum funding that will be allowed for such an Institutional E/PO proposal is \$7.5K per year for each one of the parent research proposals with which the umbrella E/PO effort is associated.
- Because not all the parent research proposals associated with a particular Institutional E/PO effort may be accepted, the Institutional proposal must clearly identify how the different elements of the E/PO proposal are related to each other, discuss the consequences of a partial selection (and concomitant funding limitation), and clearly demonstrate the continued viability (including arrangements for leadership of the overall effort) of the proposed program should a partial selection be offered. The page limit for an Institutional E/PO proposal is expanded to five pages (one extra page from that indicated in Section 5 below) to allow discussion of these issues.

3.3 E/PO Proposal as a Supplement to an Existing, Multiple Year OSS NRA Award

The PI of an existing multiple year award selected through any OSS NRA (including this one) having at least one year remaining in its period of performance may submit an E/PO proposal as a supplement to that parent research award. The period of performance for such a supplemental E/PO activity is limited to the balance of the period of performance of the research award. Such a supplemental E/PO proposal should be prepared as a stand-alone package following the format and content guidelines given in Section 5 and submitted in each of two ways:

- (i) as two hard copies submitted with the Progress Report required for the annual funding allotment needed to continue the parent award; and
- (ii) as an electronic submission to the Web site identified in Section 5 (note: for this option, the Web site will request the information needed to coordinate the E/PO supplement with its parent research award, in particular, the grant or contract number and title of the “parent” award, the names of the NASA science program and Discipline Scientist under which that award was first made; and the anniversary date of the parent award).

Such E/PO supplement proposals will be reviewed using the evaluation criteria described above, and, if accepted, the E/PO funding is restricted to start on the anniversary date of the parent award.

4. Assistance for the Preparation of E/PO Proposals

NASA OSS has established a nation-wide infrastructure of space science education/outreach groups whose purpose is to directly aid space science investigators in identifying and developing high quality E/PO opportunities. This infrastructure provides the coordination, background, and linkages for fostering partnerships between the space science and E/PO communities, and the services needed to establish and maintain a vital national, coordinated, long-term OSS E/PO program. Of particular interest to proposers to this NRA are two elements of this system (which are also described in more detail in the OSS education/outreach implementation plan referred to in Section 1 above):

- Four OSS science theme-oriented E/PO “Forums” to help orchestrate and organize in a comprehensive way the education/outreach aspects of OSS space science missions and research programs, and provide both the space science and education communities with ready access to relevant E/PO programs and products; and

- Five regional E/PO “Broker/Facilitators” to search out and establish high leverage opportunities, arrange alliances between educators and OSS-supported scientists, and help scientists turn results from space science missions and programs into educationally-appropriate activities suitable for regional and/or national dissemination

Prospective proposers are strongly encouraged to make use of these groups to help identify suitable E/PO opportunities and arrange appropriate alliances. Proposers should be careful to note that these Forums and Broker/Facilitators have been established to provide help, but the responsibility for actually developing the E/PO program and writing the proposal is that of the proposer. Points of contact and addresses for all of these E/PO Forums and Broker/Facilitators may be found by opening *Education and Public Outreach* from the menu of the OSS homepage at <<http://www.hq.nasa.gov/office/oss/>>.

5. Preparation and Submission of an E/PO Proposal

In order to be considered for evaluation, E/PO proposals must adhere to the following formats and also must be submitted both electronically and in hard copy as described below.

- An E/PO proposal is to consist of a contiguous body and budget:
 - The body of the E/PO proposal is limited to four pages ($\leq 17,000$ characters, including spaces, using the fonts and page layouts specified elsewhere in this NRA) and must include the following parts: a brief abstract of the proposed activity (not to exceed 800 characters); an expanded description of the E/PO objectives and planned activities; a description of the intended involvement of the Principal Investigator and/or key science team members in the proposed E/PO effort; a description of any educational personnel who are involved in the effort, including proposed partnership institutions (together with specific indicators of commitment on the part of partners where appropriate); a description of how the effort will be managed; and a brief explanation of the requested E/PO budget. Note that the PI or one of the science team members of the parent research proposal must have the prime responsibility for overseeing the implementation of the proposed E/PO activity. The responsible individual should be clearly identified in the body of the E/PO proposal.

- The period of performance of an E/PO activity may not exceed that of the parent proposal. The E/PO budget must be summarized for its intended total period of performance, as well as for each individual year thereof, using the format entitled *Budget Summary for Optional Education/Public Outreach Proposal* given at the end of this program element (therefore, an E/PO effort proposed for a three year period of performance will require four budget sheets). In addition, this E/PO budget must be integrated line-for-line into the *Budget Summary* for the entire parent research proposal discussed in Section C.5 and given in Section C.6 of Appendix C of this NRA.
- An E/PO proposal (both body and budget) must be submitted by each of two separate ways:
 - As an electronic submission (for the evaluation process) by uploading it, including its *Budget Summary* sheets, to the secure Web site <<http://cass.jsc.nasa.gov/panel/>>, which provides instructions for this activity using a wide variety of formats. In accordance with the size limits specified above, the peer evaluations will consider only the first 800 characters submitted for the E/PO abstract and 17,000 characters for its body. Proposers without Web access or who experience difficulty in using this site may request assistance from the Lunar and Planetary Institute by E-mail at <panel@lpi.jsc.nasa.gov> or by phone at (281) 486-2137; and
 - As part of the total hard-copy version of the research proposal (see the ordered list of component parts for proposals elsewhere in this NRA); also note that the *Cover Page* for the research proposal must indicate that an E/PO proposal is included by checking the appropriate notification on the form provided on the Web site for its submission.

6. Reporting Activities for Approved E/PO Proposals

In order to assist OSS in obtaining a coherent picture of the entire portfolio of E/PO efforts supported across all OSS programs, the appropriate OSS Education Forum (see Section 4 above) will contact proposers whose NRA E/PO components are selected to obtain summary information concerning the nature of and intended audience for their selected E/PO effort. In addition, a brief E/PO progress report will be required in conjunction with the annual progress report required for the continuation of the parent research award. A more complete report will also be required at the completion of the E/PO activity. The Education Forums will supply a simple template for preparation of such reports.

7. Additional Information

Questions about this E/PO program may be directed to:

Dr. David Bohlin
Code SR
Office of Space Science
National Aeronautics and Space Administration
Washington DC 20546-0001
Telephone: (202) 358-0880
E-mail: david.bohlin@hq.nasa.gov

Finally, attention is also called to the Initiative to Develop Education through Astronomy and Space Science (IDEAS) program administered by the Space Telescope Science Institute (STScI) on behalf of OSS. The IDEAS program is open to any space scientist based in the U.S. regardless of whether or not they hold a research grant from NASA OSS. This program, which selects proposals yearly, provides awards of up to \$40K to foster the development of innovative approaches to space science education and outreach by space scientists and their educator partners. The annual solicitation for the IDEAS program is typically released in July with proposals due in October. The annual request for proposals is posted at <<http://opposite.stsci.edu/pubinfo/edugroup/ideas.html>>. Inquiries may be addressed by E-mail to <**Error! Reference source not found.**> or by postal mail to:

IDEAS Program
Office of Public Outreach
Space Telescope Science Institute
3700 San Martin Drive
Baltimore, MD 21218.

BUDGET SUMMARY

for

OPTIONAL EDUCATION/PUBLIC OUTREACH PROPOSAL

(Note: To be integrated with that for the "parent" Research Proposal)

For (check one):

___ **Total Period of Performance from (M/D/Y) _____ to _____**
/or/

___ **Year _____ of _____ from (M/D/Y) _____ to _____**

1. Direct Labor (salaries, wages, and fringe benefits) _____
2. Other Direct Costs:
 - a. Subcontracts _____
 - b. Consultants _____
 - c. Equipment _____
 - d. Supplies _____
 - e. Travel _____
 - f. Other _____
3. Facilities and Administrative Costs _____
4. Other Applicable Costs: _____
5. SUBTOTAL--Estimated Costs _____
6. Less Proposed Cost Sharing (if any) _____
7. Carryover Funds (if any)
 - a. Anticipated amount : _____
 - b. Amount used to reduce budget _____
8. Total E/PO Estimated Costs _____